

The U.S. Environmental Protection Agency and U.S. Geological Survey—Partnering to Promote Good Science for Better and More Cost-Effective Results

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Keywords: Superfund, intragency, USGS, RI/FS, sampling

In the U.S. Environmental Protection Agency (U.S. EPA) Superfund Program, typically remedial investigation and feasibility studies are carried out through a Response Action Contract. Contractors utilize their extensive labor pool to bring technical expertise to the U.S. EPA on Superfund projects. In many projects, however, contractors typically subcontract specialized environmental investigative activities. These activities can include field testing, sampling, forensics, and modeling, among others.

In 1998, the Region 6 U.S. EPA Superfund developed an inter-agency program with the USGS through an in-house liaison from the USGS to collaborate extensively on projects. Through inter-agency agreements, the Region 6 Superfund program has been able to integrate USGS scientists with U.S. EPA Superfund issues to solve environmental problems on sites and assist in technical oversight of fieldwork and reporting.

Successful collaborations with USGS scientists have occurred on more than 30 Superfund sites in Region 6 since 1998. Chemical analyses and age-dating of sediment cores at Devils Swamp Lake in Louisiana by scientists at the USGS in Austin, TX, provided evidence showing dates of deposition of PAHs related to nearby contaminant releases. Site review and knowledge of chromium geochemistry in groundwater by a USGS scientist in Dallas, TX, provided a basis to modify sampling procedures that eliminated chromium as a contaminant at the DL Mud and Gulf Coast Vacuum Systems Superfund sites in Louisiana. Field applications of portable gas chromatography by USGS scientists in Texas and New Mexico have assisted investigations at four Superfund sites, resulting in more efficient fieldwork and considerable cost benefit. Application of improved, state-of-the-art, surface geophysical equipment and methods from the USGS at five Superfund sites have provided locations of free product contamination and subsurface lithologies to guide drilling activities in the field, resulting in better conduct of fieldwork and cost benefits. Successes have also been realized through USGS assistance, with better understanding and application of monitored natural attenuation, bioaugmentation, soil vapor sampling and analyses, and fate and transport modeling. USGS capabilities in these and other areas of science have provided opportunities for the U.S. EPA to obtain unbiased technical expertise from another federal agency, resulting in better science and cost efficiencies at U.S. EPA Superfund sites.